Troubleshooting Guide

Before proceeding through the check list below, examine the connections and the procedures outlined in the manual. Should any problem persist after you have checked the following items, consult your nearest Sony dealer.

Problem	Cause	Solution
No station can be tuned in by Automatic Tuning operation.	The AM tuning interval is set incorrectly.	Change the tuning interval according to the AM frequency allocation system of your country.
	The signal strength of the stations is too weak for Automatic Tuning.	Adjust the antenna.
		Directly tune in the stations.
The STEREO indicator flickers or does not appear when receiving stereo programs.	A very weak FM station or a noisy FM program is received.	Adjust the antenna or connect an external FM antenna.
		Press FM MODE to set to MONO mode.
No stations can be tuned in by pressing PRESET TUNING +/–.	No stations have been preset.	Preset the stations.
No sound is heard even if you adjust VOLUME.	The speaker or program source equipment is not connected correctly.	Connect the equipment correctly.
	The SPEAKERS A/B buttons are not set correctly.	Set the buttons correctly. If the A and B buttons are both depressed, check that both speaker systems are properly connected.
	A wrong function selector has been pressed.	Press the correct function selector.
One channel does not transmit audio, or the volume from the left and right speakers is unbalanced.	The BALANCE control is not set appropriately.	Adjust the BALANCE control.
	The speaker or program source is not connected correctly.	Check and properly connect the equipment.
There is an abrupt loss of sound from one or both of the speakers, and the protector indicator [■] flickers in the display window.	A short-circuit problem activates the protective circuit.	Turn off the unit, eliminate the short- circuit problem and turn on the power again. If there is no short-circuit problem, consult your nearest Sony dealer.
Sound transmitted from the speakers is reversed.	The speakers are not connected correctly.	Connect the right speaker to the R SPEAKER terminals and the left speaker to the L SPEAKER terminals.
There is lack of bass sound or the instrument position is obscure.	The ⊕/⊖ connection of the speaker is reversed.	Connect the speaker with the correct phase.
Severe hum or noise is heard.	The connections are loose.	Make secure connections.
	The plugs and jacks are dirty.	Wipe the plugs and jacks with a cloth lightly dampened with alcohol.
The remote commander will not operate.	The batteries are exhausted.	Replace the batteries with new ones.

SONY

3-756-536-21(1)

FM Stereo/FM-AM Receiver

Operating Instructions

STR-D911

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Specifications

Audio Power Specifications (U.S.A. and Canadian Models)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 8-ohm load, both channels driven, from 40 - 20,000 Hz, rated 70 watts per channel minimum RMS power, with less than 0.8% total harmonic distortion from 250 milliwatts to rated output.

Other Specifications (for All Models)

Amplifier section

Continuous RMS power output (8 ohms, at 40 Hz - 20 kHz less than 0.8% total harmonic distortion)
- 75 W + 75 W
- 60 W + 60 W (Australian model)

Dynamic power (at 1 kHz, IHF)
- 90 W + 90 W (8 ohms)
- 80 W + 80 W (8 ohms) (Australian model)
- 120 W + 120 W (4 ohms)
- 110 W + 110 W (4 ohms) (Australian model)

Harmonic distortion
- Less than 0.8% at rated output

Frequency response
- PHONO: RIAA equalization curve ±0.5 dB
- CD, VIDEO, TAPE: 10 Hz - 50 kHz ±1 dB

Inputs

PHONO	2.5 mV	50 kilohms	74 dB 72 dB* (A, 2.5 mV)
CD, VIDEO, TAPE 1/A, TAPE 2, MONITOR	200 mV	50 kilohms	95 dB 80 dB* (A, 200 mV)

* '78 IHF

Outputs

REC OUT, VIDEO (AUDIO)	Voltage 200 mV Impedance 10 kilohms
HEADPHONES	Accepts low and high impedance headphones

Tone controls
- BASS: ±10 dB at 100 Hz
- TREBLE: ±8 dB at 10 kHz

Loudness control
- +6 dB (at 100 Hz)

Tuner section

	FM tuner section	AM tuner section
Tuning range	87.5 – 108 MHz	530 – 1710 kHz (10 kHz step) 531 – 1602 kHz (9 kHz step)
Antenna terminals	300 ohms, balanced 75 ohms, unbalanced	External antenna terminal
[illegible]	18.3 dBf, 4.5 µV (mono) 38.3 dBf, 45 µV (stereo)	—
[illegible]	11.2 dBf, 2 µV (IHF)	Loop antenna: 500 µV (at 1,000 kHz)
[illegible]	76 dB (mono) 70 dB (stereo)	54 dB (at 50 mV/m)
[illegible]	0.3% (mono), 0.5% (stereo) at 1 kHz	0.5% (at 50 mV/m, 400 Hz)
[illegible]	60 dB at 400 kHz	40 dB at 10 kHz
[illegible]	45 dB at 1 kHz	—
[illegible]	30 Hz — 15 kHz $^{+0.5}_{-2}$ dB	—

General

System
- Tuner section: PLL quartz-locked digital synthesizer system
- Preamplifier section: low-noise NF type equalizer amp
- Power amplifier section: pure complementary SEPP

Power requirements
- 120 V AC, 60 Hz
- Australian model: 240 V AC, 50 Hz

Power consumption
- U.S.A. model: 135 W
- Canadian model: 150 W
- Australian model: 125 W
- In standby condition: 5 W

AC outlet
- U.S.A. and Canadian models: One switched (120 W/1A Max.)
- Australian model: 100 W switched

Dimensions
- Approx. 430 x 135 x 295 mm (w/h/d)
- ($17 \times 5\,^3/_8 \times 11\,^5/_8$ inches)
- including projecting parts and controls

Weight
- Approx. 6.2 kg (13 lb 1 oz)

Accessories supplied
- FM wire antenna (1)
- AM loop antenna (1)
- Remote commander RM-S103 (1)
- Sony batteries SUM-3(NS) (2)

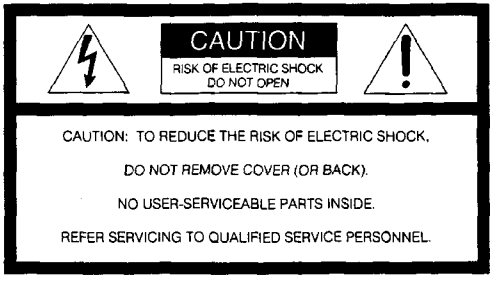
Design and specifications are subject to change without notice.

Sony Corporation Printed in Malaysia

WARNING

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Note to CATV system installer
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Owner's Record

The model number is located on the rear exterior and serial number is on the rear. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. STR-D311 Serial No._____

CAUTION
You are cautioned that any change or modifications not expressly approved in this manual could void your authority to operate this equipment.

For the customers in Canada

CAUTION :
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

This apparatus complies with the Class B limits for radio noise emissions set out in Radio Interference Regulations.

Precautions

On safety
- For U.S.A. and Canadian models, operate the unit only on 120 V AC, 60 Hz.
- For Australian model, operate the unit only on 240 V AC, 50 Hz.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer. (not applicable to Australian customers)
- AC power cord must be changed only at the qualified service shop.
- This unit is not disconnected from the AC power source as long as it is connected to the mains outlet, even if the unit itself has been turned off.

On operation
Before making program source connections, be sure to turn the power switch off and unplug the unit.

On cleaning the cabinet
Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine.

For the customers in the U.S.A.
For detailed safety precautions, see the "IMPORTANT SAFEGUARDS" leaflet.

If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

Overview

The STR-D311 is an FM Stereo/FM-AM receiver and you can listen to various audio/video program sources with this unit.

Tuner
- Precise tuning is ensured by a quartz locked digital synthesizer.
- A total of 30 FM/AM stations can be preset in 3 memory pages (A, B and C) that allow you to classify stations.

Remote commander
- The supplied remote commander allows you to remotely control this unit.

Unpacking

To prevent internal heat buildup in the unit,
place the unit in a location with adequate air circulation.
Do not install the unit:
- near heat sources such as radiators or air ducts.
- in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

Do not place anything on top of the cabinet.
The top ventilation holes must be unobstructed for the proper operation of the unit and to prolong the life of its components.
Do not throw away the carton and packing material!
It will be an ideal container when transporting the system for repair work, etc.

Checking the Supplied Accessories

After unpacking, check that the following accessories are present.
- FM wire antenna ..... (1)
- AM loop antenna ..... (1)
- Remote commander RM-S103 ..... (1)
- Sony batteries SUM-3 (NS) ..... (2)

Selecting the AM Tuning Interval (Except for Australian Model)

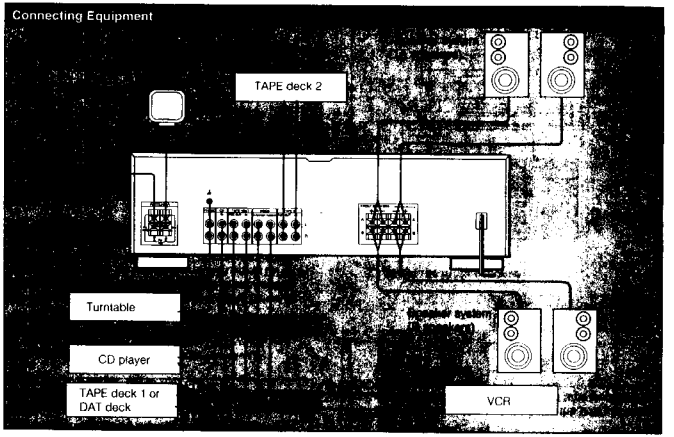
The AM tuning interval is preset to 10 kHz. To use the receiver where the frequency allocation system is based on a 9 kHz interval, make the following adjustments.

1 Turn on the power and tune into any AM station.
2 Turn off the power.
3 Press the POWER button while pressing the "+" TUNING button.
To reset the AM tuning interval, repeat the above steps.

Caution
When the interval is changed, all preset stations which you have memorized will be erased. After changing the interval, be sure to preset the stations again.

Hooking Up the System

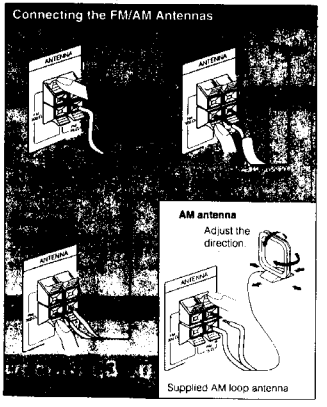
Connecting Equipment



- The red jacks of the receiver are for right-channel (R) connections and the white jacks for left-channel (L).
- The cable connectors should be fully inserted into the jacks. Loose connection may cause hum and noise.

Note on power source connection
Be careful that the power consumption of equipment connected to the outlet on the receiver does not exceed 120 watts for USA and Canada models or 100 watts for Australian model.
Do not connect electrical home appliances such as an electric iron, fan, TV, or other high-wattage equipment to these outlets.

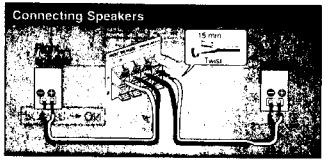
Connecting the FM/AM Antennas



Connecting the Antenna Ground

To prevent hum, connect the ground wire to ANTENNA ground terminal ($\frac{1}{\text{Ty}}$).
When an outdoor antenna is installed, be sure to connect the ground wire for lightning protection.

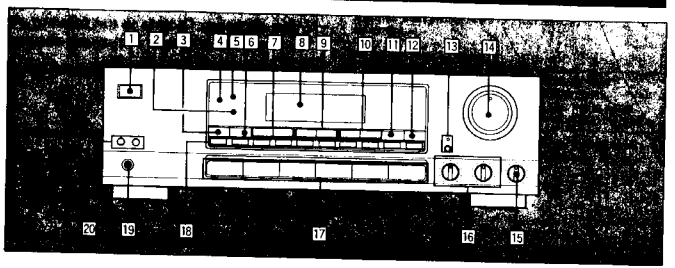
Connecting Speakers



Note
As the speakers A and B are connected in series, the sound volume will be slightly decreased with both speaker systems driven.

Identifying the Parts and Controls

Front Panel



1 **POWER switch**

2 **TAPE 2 MONITOR indicator**

3 **SHIFT button**

4 **Remote sensor**

5 **STANDBY indicator** (for Australian model only)
The STANDBY indicator lights up when the power cord is connected.

6 **MEMORY button**

7 **TUNING +/– buttons**

8 **Display window**

9 **PRESET TUNING +/– buttons**

10 **FM/AM band selectors**

11 **TUNING DIRECT button**

12 **FM MODE button**

13 **LOUDNESS button and indicator**

14 **VOLUME control**

15 **BALANCE control**

16 **BASS/TREBLE controls**

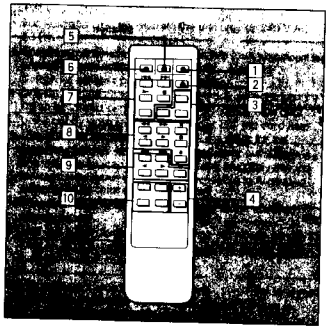
17 **Function selectors**
When the TAPE 2 MONITOR is pressed, the indicator of the last selected function also remains lit. But the TAPE 2 MONITOR button has priority and the taped or digital audio taped program can be heard.

18 **Numeric buttons**

19 **HEADPHONES jack**

20 **SPEAKERS A/B buttons**

Remote Commander RM-S103



1 **POWER button**

2 **DBFB button***

3 **TUNER PRESET +/– and SHIFT buttons**

4 **VOLUME +/– buttons**

5 **SURROUND button***

6 **MUTING button***

7 **CD player operation buttons**
D. (disc) SKIP: When your CD player is equipped with a multi-disc changer, use this button to select loaded disc.
CD ▶: Selects the CD function and starts CD playback.
⏮/⏭: Locates a desired selection.
■: Stop

8 **DECK B operation buttons** (also for single tape deck)
DECK B ◀/▶: Select tape function and start tape playback on deck B.
◀◀/▶▶: Fast winding
⏸: Pause
■: Stop
●: Recording

9 **DECK A operation buttons**
DECK A ◀/▶: Select tape function and start tape playback on deck A.
◀◀/▶▶: Fast winding
⏸: Pause

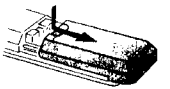
10 **Function select buttons**

* These buttons does not function for the unit.

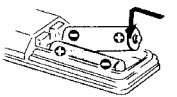
Notes on the remote commander
For the functions other than the receiver's own ones, the remote commander is effective only with Sony components having a remote sensor with a ■ mark.

Inserting the Batteries into the Remote Commander

1 Open the cover.



2 Insert two size AA (R6) batteries with correct polarity.

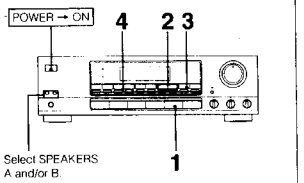


To avoid damage caused by battery leakage and corrosion
When the commander will not be used for a long time, remove the batteries.

Battery life
Normal operation can be expected about a half year using Sony SUM-3 (NS), and a year using Sony AM-3 (NW) alkaline batteries.
When the batteries are run down, the remote commander will not operate the unit. In this case, replace both batteries with new ones.

Receiving FM/AM Broadcasts

Tuning in a Station Directly – Direct Tuning



1 Press TUNER.

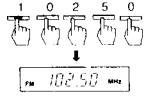
2 Select FM or AM.

3 Press TUNING DIRECT.

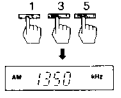
4 Press the appropriate numeric buttons to enter the frequency. (See examples below.)

The entered frequency is displayed.

Example 1: FM 102.50 MHz



Example 2: AM 1350 kHz



To receive another frequency
Repeat steps 3 to 4.

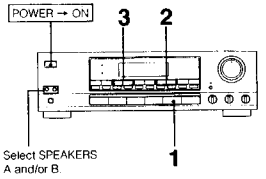
For entering AM frequencies
You need not enter the last "0". (except Australian model) However, if you have changed the AM tuning interval to 9 kHz, enter all the digits.

When an FM stereo program is noisy
When the unit receives an FM stereo program, the STEREO indicator lights on the display. If the stereo program is noisy, press FM MODE to change the mode over to MONO. This eliminates the stereo effect, but the noise will be greatly reduced.
To return to the stereo mode, press FM MODE again.

When FM or AM station is tuned in with a difficult reception
The signal strength may be weak. In this case, follow the instructions below.
For FM reception
- Adjust the antenna direction.
- Connect the outdoor FM antenna.

For AM reception
- Connect a 6 to 15 meter (20 to 50 feet) insulated wire to the AM antenna terminal. Extend this out of doors if possible, keeping the greater portion horizontal.
  There is no need to disconnect the supplied antenna.

Automatic Tuning



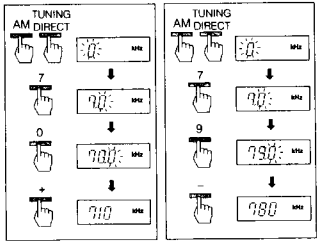
1 Press TUNER.

2 Select FM or AM.

3 Press TUNING + or –.
+: For a higher frequency
–: For a lower frequency
When a station is received, automatic tuning stops automatically. To change the station, press + or – again.

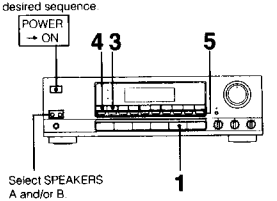
When sweeping does not stop at the desired station
The signal strength is weak. Tune in the station as described in "Tuning in a Station Directly".

Quickly tuning in a roughly known frequency
Proceed as the following example.
Example: The station between AM 700 and AM 800 kHz.



Presetting Stations

A total of 30 FM/AM stations can be memorized in any desired sequence.



1 Press TUNER.

2 Tune in the desired station. (See "Automatic Tuning" or "Tuning in a Station Directly".)

3 Press MEMORY and the MEMORY indicator appears for a few seconds.

4 Press SHIFT to select the memory page (A, B or C).

5 Press the desired numeric button (1 to 0), while the MEMORY indicator is displayed.

Repeat above steps for presetting other desired stations.

Use of memory pages
The memory pages (A, B and C) can be used to classify stations according to the music category, station band, etc.

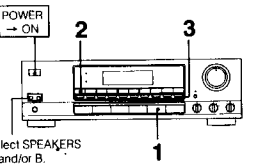
Replacing a preset station
Preset another station on the number of the station to be replaced. The previously preset station will be erased.

IMPORTANT
The memorized station is maintained for approximately one month even if the power cord is disconnected from the AC power outlet. If they are erased, store the stations again.

Tuning in a Preset Station – Preset Tuning

There are two ways to perform the preset tuning.
In method A, the direct tuning, select by designating the desired preset station number directly with the numeric button. In method B, the scan tuning, select the preset station with the PRESET TUNING +/– button.

Method A

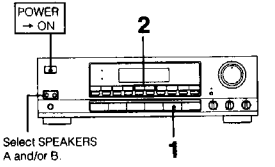


1 Press TUNER.

2 Press SHIFT to select the memory page (A, B or C).

3 Press the numeric button.

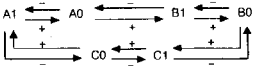
Method B



1 Press TUNER.

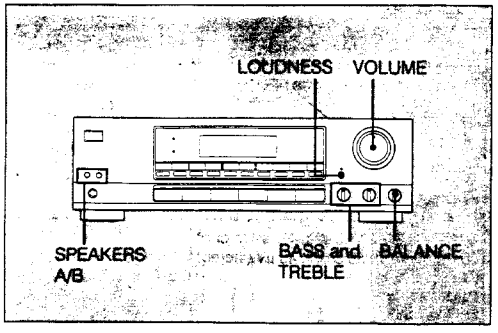
2 Press PRESET TUNING + or –.
+: For a higher preset number
–: For a lower preset number

Each time you press + or –, the preset station of the next higher or lower number is tuned in.



- If you keep pressing + or –, preset stations are successively tuned in. Release the button when the desired preset station is tuned in.

Audio Adjustment



Adjusting volume

To adjust volume
Turn VOLUME.

Adjusting Tone Quality

Adjust BASS or TREBLE for the optimum sound.

Adjusting Left and Right Sound Balance

Adjust BALANCE to correct stereo imaging, when the speaker position is not symmetrical.

Reinforcing the Bass

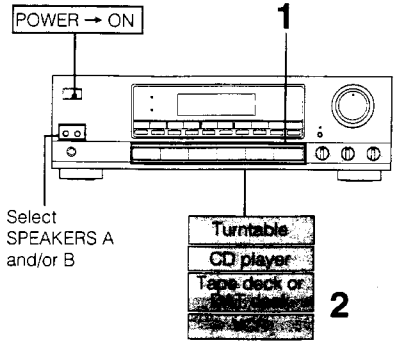
Press LOUDNESS.
The lower the speaker output level is, the more bass frequency sound is emphasized.

Selecting the Speaker System

To drive speaker system A: Press SPEAKERS A.
To drive speaker system B: Press SPEAKERS B.
To drive both speaker systems A and B: Press both SPEAKERS A and B.
For headphones listening: Connect headphones to HEADPHONES and set SPEAKERS A and B to off.

IMPORTANT
Speaker systems A and B are connected in series. No sound can be heard if the SPEAKERS A and B buttons are set to on when only one speaker system is connected.

Selecting a Program Source



1 Select the progam source.

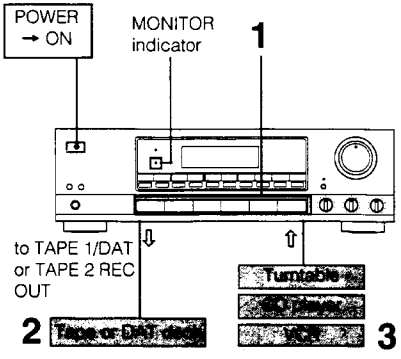
	The function selector to be pressed
Phono record	PHONO
Radio Broadcast	TUNER
Compact disc	CD
DAT or Taped programs	TAPE 1/DAT, TAPE 2 MONITOR
Video programs	VIDEO

If only pressing one of the FUNCTION buttons on the supplied remote commander, both the power of its operating equipment and the receiver are turned on.

2 Start the selected program.

Recording an Audio Source

Recording



1 Select the desired program source with the function selector.
For an FM/AM broadcast, tune in the desired station.

2 Set the tape (DAT) deck in the recording mode.

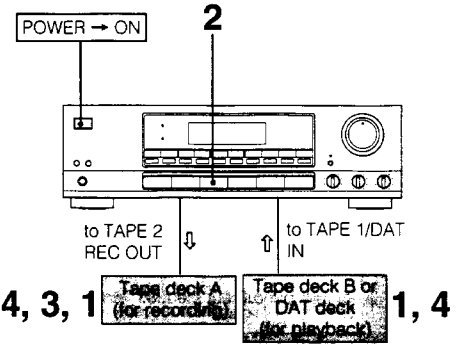
3 Start the selected program source.

Note on recording
The settings of VOLUME, BASS/TREBLE, BALANCE and LOUDNESS do not have any effect on recording.

To monitor recorded sound during recording (when a cassette deck with a three-head system is connected)
Select the program to be recorded and then press TAPE 2 MONITOR so that the TAPE 2 MONITOR indicator lights up. If TAPE 2 MONITOR is pressed before selecting the program to be recorded, the monitor function is released.

Note
Only the recorded sound of a cassete deck connected to TAPE 2 jacks can be monitored.

Tape Dubbing



1 Insert the recorded tape into tape deck B (or the DAT deck) and a blank tape into tape deck A.

2 Press TAPE 1/DAT to select the deck for playback.

3 Adjust the recording level of tape deck A.

4 Start the playback of the tape (or the DAT) in tape deck B (or the DAT deck), and set tape deck A in the recording mode.
Dubbing will start.